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HELLER EHRMAN LLP  
275 MIDDLEFIELD ROAD  
MENLO PARK, CA 94025-3506

EXAMINER
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DAO, THUY CHAN

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2192

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/757,718

Applicant(s)

WEST ET AL.

Examiner

Thuy Dao

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on October 30, 2007 has been entered.

2. Claims 1-55 have been examined.

### **Response to Amendments**

3. Per Applicants' request, claims 1, 36, and 49 have been amended.

4. The 35 USC §112, second paragraph rejection over claims 1-55 is withdrawn in view of Applicants' amendments.

### **Response to Arguments**

5. Applicants' arguments have been considered but are moot in view of the new ground(s) of rejection.

### **Drawings**

6. The drawings are objected to because minor informalities:

**Figure 3:** hand-written reference number "32". Furthermore, in Figure 3, "32" indicates "Sequenced Interactions" while the specification, [0036], "32" indicates "flow control structures". For consistency between Figure 3 and the specification, "Flow Control Structures" should be used for the reference number "32";

**Figure 4:** hand-written reference number "56". Furthermore, in the specification, paragraph [0043] sets forth "an identification field 56 within the application metadata repository 54" (emphasis added). However, the newly added identification filed "56" in Figure 4 is independent/separate with the application metadata repository "54" (i.e., not within the repository 54). For consistency, "56" should be deleted in both Figure 4 and specification;

**Figure 6:** "54" should be deleted because this reference number has been used to indicate the application metadata repository 54;

**Figure 5:** block "Read Input Scripts" should have a rectangle shape, "YES" of block "Read Input Scripts" should be deleted, the diamond shapes of blocks "Read Error?", "Parse Error?", and "Conversion Error?" should be replaced by rectangle shapes, and the question marks "?" of these three blocks should be deleted;

**Figure 7:** acronym "AOM" should be spelled out to be more descriptive because the related text [0040-0044] does not mention about this block including "AOM"; and

**Figure 11:** "381" should be - -318- -.

Appropriate correction is required.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### **Specification**

7. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the instant case, the abstract exceed 150 words in length. Appropriate correction is required.

8. In page 7, paragraph [0041] recites the reference number "116" for both "program instructions" and "database". Appropriate correction is required.

### **Claim Objections**

9. Claims 1 and 49 are objected to because of minor informalities.

Line 4, the phrase to be read as - -decompose test cases into [[applications]] application states... - - as recited in line 7; and

Line 6: the phrase to be read as - -generating rule based test cases using rule-based generation of test cases ..." according to the specification, page 3, [0015-0016] and limitations recited in lines 12-14.

10. Claim 36 should be marked as - -(previously presented)- - in the next communication with the Office.

Appropriate correction is required.

### **Claim Rejections – 35 USC § 103**

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11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 7,313,564 to Melamed et al. (art made of record, hereinafter "Melamed") in view of WinRunner (art of record, "WinRunner 7.0 Tutorial").

**Claim 1:**

Melamed discloses *a method for generating test scripts comprising:*

*test cases (e.g., col.9: 62 – col.10: 6; col.12: 7-14 and 38-53);*

*generating rule based test cases using rule-based generation of test cases from an abstract representation (e.g., FIG. 18, Test Case 182 generated by Integrated Test Case Authoring Tool, col.13: 34 – col.14: 49; FIG. 1-8 and related text; GUI environment file, col.12: 7-64)*

*validating the rule based test cases (e.g., FIG. 5, col.9: 17-39; col.14: 31-38); and*

*converting the rule based test cases to test scripts that are platform independent and the rule based test cases can be used to generate scripts in different target environments (e.g., FIG. 18, XML or Flat Encoder 183/ Parser 185, col.13: 34 – col.14: 49).*

Melamed does not explicitly disclose other limitations. However, in an analogous art, WinRunner further discloses:

*using semantic analysis to decompose test cases into application states, external interaction sequences and input data (e.g., pp. 22-26, GUI Map as abstract representation);*

*an abstract representation* (e.g., pp. 36-50, Choosing a record mode; page 35, recording test in Context Sensitive Mode and associated rules; page 36, recording test in Analog Mode and associated rules) *that includes*

*application states, external interaction sequences and input data of test cases from data stores* (e.g., pp. 35-38, recording all mouse clicks and keyboard inputs, states of application under tests; starting Flight Reservation application with associated databases),

*wherein each application state is a set of application objects associated with a set of attributes and their values* (e.g., page 22, GUI objects; page 24, GUI objects and properties; pp. 72-80 changing GUI objects), *or*

*represents a runtime snapshot of an application under test which defines a context of external interaction* (e.g. pp. 39-42, starting the Flight Reservation application with runtime snapshots, checkpoints);

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine WinRunner's teaching into Melamed's teaching. One would have been motivated to do so to utilize automation tool such as WinRunner or SilkTest as suggested by Melamed (col.9: 50-67; col.12: 7-53) and/or utilize automated testing for GUI applications as suggested by WinRunner (pp. 12-14).

**Claim 2:**

The rejection of claim 1 is incorporated. Melamed also discloses *a data store is a relational database management system* (e.g., FIG. 20, col.13: 57 – col.14: 56).

**Claim 3:**

The rejection of claim 1 is incorporated. Melamed also discloses *a data store is an XML database management system* (e.g., FIG. 19, col.7: 14-62).

**Claim 4:**

The rejection of claim 1 is incorporated. Melamed also discloses *a data store is a file system* (e.g., col.12: 7-53).

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**Claim 5:**

The rejection of claim 1 is incorporated. WinRunner discloses *an application state represents a runtime snapshot of application under test which defines the context of external interaction* (e.g., pp. 39-42).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine WinRunner's teaching into Melamed's teaching. One would have been motivated to do so to utilize automation tool such as WinRunner or SilkTest as suggested by Melamed (col.9: 50-67; col.12: 7-53) and/or utilize automated testing for GUI applications as suggested by WinRunner (pp. 12-14).

**Claim 6:**

The rejection of claim 5 is incorporated. WinRunner discloses *the application state includes a set of application objects, its attributes and attribute values* (e.g., pp. 22-24).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine WinRunner's teaching into Melamed's teaching. One would have been motivated to do so as set forth above.

**Claim 7:**

The rejection of claim 5 is incorporated. WinRunner discloses *the application states corresponding to a test case are arranged in a hierarchical manner* (e.g., page 166).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine WinRunner's teaching into Melamed's teaching. One would have been motivated to do so as set forth above.

**Claim 8:**

The rejection of claim 1 is incorporated. WinRunner discloses *the external interaction sequences represent events invoked by external agents on the application objects* (e.g., page 104).



It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine WinRunner's teaching into Melamed's teaching. One would have been motivated to do so as set forth above.

**Claim 9:**

The rejection of claim 8 is incorporated. WinRunner discloses *the external agents are human agents or other software agents* (e.g., pp. 104-106).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine WinRunner's teaching into Melamed's teaching. One would have been motivated to do so as set forth above.

**Claim 10:**

The rejection of claim 8 is incorporated. WinRunner discloses *the interaction sequencing includes flow control structures for capturing sequential, concurrent, looping and conditional interactions* (e.g., pp. 35-38).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine WinRunner's teaching into Melamed's teaching. One would have been motivated to do so as set forth above.

**Claim 11:**

The rejection of claim 1 is incorporated. Melamed also discloses *the validation of rule based test cases includes internal and external validation* (e.g., FIG. 5, col.9: 17-39).

**Claim 12:**

The rejection of claim 11 is incorporated. Melamed also discloses *the internal validation ensures that the components of the test case definition, external interaction sequences and input data are consistent with each other and with an application object model* (e.g., FIG. 18, blocks 186, 187, 188).

**Claim 13:**

The rejection of claim 12 is incorporated. Melamed also discloses *an application object model is a metadata representation for modeling application under test* (e.g., FIG. 16, col.7: 1-12 and 49-62).

**Claim 14:**

The rejection of claim 13 is incorporated. Melamed also discloses *the metadata representation includes object type definitions for application objects* (e.g., FIG. 10, col.10: 16-48).

**Claim 15:**

The rejection of claim 13 is incorporated. Melamed also discloses *the metadata representation includes attribute definitions for each application object type* (e.g., FIG. 8, col.12: 65 – col.13: 26).

**Claim 16:**

The rejection of claim 13 is incorporated. Melamed also discloses *the metadata representation includes definition of methods and events that are supported by each application object type* (e.g., col.2: 45 – col.3: 55).

**Claim 17:**

The rejection of claim 13 is incorporated. Melamed also discloses *the metadata representation includes definition of effects of events on an application state* (e.g., col.5: 39 – col.6: 44).

**Claim 18:**

The rejection of claim 14 is incorporated. Melamed also discloses *application object type definitions include additional categorization of each application object types into hierarchical, container and simple types* (e.g., col.7: 63 – col.8: 15).

**Claim 19:**

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The rejection of claim 18 is incorporated. Melamed also discloses *the hierarchical object types are associated with an application state of its own, wherein application object types that can contain instances of other objects are termed container types* (e.g., col.8: 16-56).

**Claim 20:**

The rejection of claim 19 is incorporated. Melamed also discloses *the state associated with a hierarchical application object type is a modal application state or a nonmodal application state* (e.g., col.9: 40 – col.10: 15).

**Claim 21:**

The rejection of claim 20 is incorporated. Melamed also discloses *a modal application state restricts possible interactions to application object instances available within the current application state* (e.g., col.10: 16-45).

**Claim 22:**

The rejection of claim 17 is incorporated. Melamed also discloses *the effects of events on an application state capture one or more consequences of the event to the application state* (e.g., col.12: 7-53).

**Claim 23:**

The rejection of claim 22 is incorporated. Melamed also discloses *a consequence of an event is selected from, creation of a new object instance of a given type, deletion of an object instance of a given type, modification of attributes of an existing object instance and selection of an instance of an object type* (e.g., col.12: 7-53).

**Claim 24:**

The rejection of claim 23 is incorporated. Melamed also discloses *creation of a new instance of an object of type that is hierarchical results in creation of a new application state* (e.g., col.15: 41 – col.16: 21).

**Claim 25:**

The rejection of claim 23 is incorporated. Melamed also discloses *selection of an object instance of type that is hierarchical results in selection of the application state associated with that object instance* (e.g., col.12: 65 – col.13: 26).

**Claim 26:**

The rejection of claim 11 is incorporated. Melamed also discloses *the external validation validates the generated test case against the application metadata repository* (e.g., pp. col.10: 16-45).

**Claim 27:**

The rejection of claim 26 is incorporated. Melamed also discloses *the application metadata repository contains definition of application objects and nature of their interactions within the application under test* (e.g., col.5: 39 – col.6: 44).

**Claim 28:**

The rejection of claim 26 is incorporated. Melamed also discloses *the external validation serves as a static verification test for the test cases* (e.g., col.8: 57 – col.9: 16).

**Claim 29:**

The rejection of claim 26 is incorporated. Melamed also discloses *the external validation increases productivity by pointing out invalid test cases* (e.g., col.8: 16-56).

**Claim 30:**

The rejection of claim 26 is incorporated. Melamed also discloses *the external validation increases productivity by pointing out inconsistencies in statically verifiable application behaviors* (e.g., col.9: 40 – col.10: 15).

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**Claim 31:**

The rejection of claim 1 is incorporated. Melamed also discloses *the test scripts are test cases represented in a scripting language* (e.g., col.2: 45 – col.3: 55).

**Claim 32:**

The rejection of claim 31 is incorporated. Melamed also discloses *the scripting languages can be typed or untyped programming languages used for recording or authoring test cases* (e.g., col.7: 63 – col.8: 15).

**Claim 33:**

The rejection of claim 1 is incorporated. Melamed also discloses *providing rules for selection of components of test case definition, external interaction sequences and input data; rules for data driven test case generation* (e.g., col.15: 41 – col.16: 21).

**Claim 34:**

The rejection of claim 33 is incorporated. Melamed also discloses *the selection rules are specified using query languages* (e.g., col.12: 65 – col.13: 26).

**Claim 35:**

The rejection of claim 34 is incorporated. Melamed also discloses *the query language is Structured Query Language (SQL)* (e.g., col.10: 46 – col.11: 29).

**Claim 36:**

The rejection of claim 34 is incorporated. Melamed also discloses *the query language is Extensible Markup Language (XML) Query (XQuery)* (e.g., col.10: 16-45).

**Claim 37:**

The rejection of claim 34 is incorporated. Melamed also discloses *the query language is Application Programming Interface (API) called from code written in a programming language* (e.g., col.7: 63 – col.8: 15).

**Claim 38:**

The rejection of claim 34 is incorporated. Melamed also discloses *the use of query languages allows test cases to be generated from live customer data* (e.g., col.2: 45 – col.3: 55).

**Claim 39:**

The rejection of claim 33 is incorporated. Melamed also discloses *the data driven test case generation involves composing the test case as dictated by the input data* (e.g., col.13: 34 – col.14: 49).

**Claim 40:**

The rejection of claim 39 is incorporated. Melamed also discloses *the availability of multiple datasets for the input data will result in generation of multiple test cases or external interaction sequences repeated within a loop control structure for each dataset* (e.g., col. 9: 62 – col.10: 6).

**Claim 41:**

The rejection of claim 39 is incorporated. Melamed also discloses *the availability of multiple datasets for a portion of the input data will result in the interaction sequences corresponding to this portion of input data repeated within a loop control structure* (e.g., col.12: 7-14 and 38-53).

**Claim 42:**

The rejection of claim 39 is incorporated. Melamed also discloses *each element of input data can be flagged valid or invalid* (e.g., pp. col.9: 17-39).

**Claim 43:**

The rejection of claim 42 is incorporated. Melamed also discloses *the presence of validity flag in the input data that is different from the one corresponding the input*

*data when the test cases was recorded or authored, results in the generator including appropriate interaction sequences for exception handling (e.g., col.14: 31-38).*

**Claim 44:**

The rejection of claim 1 is incorporated. Melamed also discloses *converting test case from internal representation to a scripting language through language mapping (e.g., col.7: 63 – col.8: 15).*

**Claim 45:**

The rejection of claim 44 is incorporated. Melamed also discloses *the mapping is used to map external interactions captured as events on application object to appropriate statements in the scripting language (e.g., col.10: 16-45).*

**Claim 46:**

The rejection of claim 44 is incorporated. Melamed also discloses *more than one language mappings are provided at the same time (e.g., col.12: 7-53).*

**Claim 47:**

The rejection of claim 44 is incorporated. Melamed also discloses *the generated test case are converted to more than one scripting language at the same time (e.g., col.15: 41 – col.16: 21).*

**Claim 48:**

The rejection of claim 47 is incorporated. Melamed also discloses *generating test cases in multiple scripting language allows generation of test scripts for multiple test execution environments (e.g., col.5: 39 – col.6: 44).*

**Claim 49:**

Melamed also discloses *a computer system, comprising:*

*a processor: a memory coupled to the processor, the memory storing rule based test cases from an abstract representation (e.g., FIG. 19, col.7: 12 – col.8: 15)*

*logic that validates the rule based test cases (e.g., FIG. 5, col.9: 17-39; col.14: 31-38);*

*logic that generates rule based test cases using rule based generation of test cases from an abstract representation representation (e.g., FIG. 18, Test Case 182 generated by Integrated Test Case Authoring Tool, col.13: 34 – col.14: 49; FIG. 1-8 and related text; GUI environment file, col.12: 7-64),*

*wherein rule based test cases are converted to test scripts that are platform independent and the rule based test cases can be used to generate scripts in different target environments (e.g., FIG. 18, blocks 183 and 185, col.13: 34 – col.14: 49).*

Melamed does not explicitly disclose other limitations. However, in an analogous art, WinRunner further discloses:

*logic that uses semantic analysis to decompose test cases into abstract representations (e.g., pp. 22-26, GUI Map as abstract representation)*

*that includes application states, external interaction sequences and input data of test cases from data stores (e.g., pp. 35-38, recording all mouse clicks and keyboard inputs, states of application under tests; starting Flight Reservation application with associated databases),*

*wherein each application state is a set of application objects associated with a set of attributes and their values (e.g., pp. 36-50, Choosing a record mode; page 35, recording test in Context Sensitive Mode and associated rules; page 36, recording test in Analog Mode and associated rules; page 22, GUI objects; page 24, GUI objects and properties; pp. 72-80 changing GUI objects), or*

*represents a runtime snapshot of an application under test which defines a context of external interaction (e.g. pp. 22-26; pp.72-80; pp. 39-46).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine WinRunner's teaching into Melamed's teaching. One would have been motivated to do so to utilize automation tool such as WinRunner



or SilkTest as suggested by Melamed (col.9: 50-67; col.12: 7-53) and/or utilize automated testing for GUI applications as suggested by WinRunner (pp. 12-14).

**Claim 50:**

The rejection of claim 49 is incorporated. Melamed also discloses *the logic that validates the test cases provides that components of a test case definition, external interaction sequences and input data are consistent with each other and with an application object model* (e.g., col.2: 45 – col.3: 55; col.8: 16-56).

**Claim 51:**

The rejection of claim 49 is incorporated. Melamed also discloses *the logic that validates the test cases is external validation logic* (e.g., col.7: 63 – col.8: 15).

**Claim 52:**

The rejection of claim 51 is incorporated. Melamed also discloses *the external validation logic includes validating a generated test case against an application metadata repository* (e.g., col.9: 40 – col.10: 15).

**Claim 53:**

The rejection of claim 49 is incorporated. Melamed also discloses *logic for providing rules for selection of components of test case definition, external interaction sequences and input data; wherein and the rules are data driven test case generation* (e.g., col.12: 7-53; col.15: 41 – col.16: 21).

**Claim 54:**

The rejection of claim 49 is incorporated. Melamed also discloses *logic for providing data driven test case generation* (e.g., col.5: 39 - col.6: 44).

**Claim 55:**

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The rejection of claim 54 is incorporated. Melamed also discloses *the logic for providing data driven test case generation includes composing the test case as dictated by the input data* (e.g., col.8: 57 – col.9: 16).

### Conclusion

13. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone is (571) 272 8570. The examiner can normally be reached on every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 2--73 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. Dao



TUAN DAM  
SUPERVISORY PATENT EXAMINER